

**FINDING OF NO SIGNIFICANT IMPACT**  
**Improvements to the Wastewater Treatment Facility**  
**Willow Beach, Lake Mead National Recreation Area**  
**Arizona**

**INTRODUCTION**

The National Park Service, Lake Mead National Recreation Area (NRA), and the Denver Service Center, have prepared an environmental assessment (EA) that evaluates the replacement of the deteriorating wastewater collection and treatment system at the Willow Beach developed area, Arizona.

**PURPOSE AND NEED**

Facilities in Willow Beach include seven launching lanes for boats, 155 pull-through parking spaces, 10 housing units, 15 picnic sites, a marina with fuel service and boat rentals, a store, and a fish cleaning station. The project is needed because the aging wastewater system currently in place at Willow Beach is deteriorating and is out of compliance with applicable State of Arizona Department of Environmental Quality (ADEQ) regulations.

**ALTERNATIVES CONSIDERED**

The environmental assessment evaluates the effects of three alternatives: no action (Alternative A), the National Park Service preferred alternative (alternative B), and an alternative that would use new evaporative sewage lagoons to treat effluent at Willow Beach (alternative C).

The no action alternative would provide no improvements to the wastewater treatment system at Willow Beach and does not meet the project objectives of providing for health and safety, natural resource protection, odor control, operational efficiency, reliability, and sustainability.

Alternative B is the management-preferred alternative. The preferred alternative constitutes the proposed action.

The aging sewage disposal and treatment system would be replaced with a new system that treats sewage via septic tanks, a recirculating sand filter, and subsurface disposal. The proposed action would also include installation of new force mains, replacement of deteriorated collection system components, construction of a new access road to the wastewater treatment area, and other miscellaneous mechanical, civil, electrical, and site work in support of the system.

Six individually sized septic tanks would be installed and would provide primary sewage treatment (separation and biological reduction of solids) at Willow Beach developed facilities (dock dump station, fish cleaning station, restrooms, store, etc.). Effluent from the six septic tanks would then be pumped 235 feet through 6-inch sanitary sewerlines to a central collection point, using duplex lift stations associated with each tank. From the collection point, a main lift station would pump the effluent along a new 4-inch force main pipeline to the wastewater

treatment area, located about 3,000 feet up Willow Beach Wash, adjacent to the downhill end of the existing sewage lagoon area. The force main would be buried beneath the new access road that would be constructed to the effluent treatment area.

A new access road would be located primarily on the north side of Willow Beach Wash and would be designed to remain accessible during a 25-year flood event, as well as to withstand a 100-year flood event, including protection of the pipeline under these storm conditions. This would require raising the road surface and protecting it with riprap. It is estimated that the road would be approximately 5 feet higher than the surrounding wash. Portions of the existing access road would be modified to meet these criteria in areas where the existing road is located along the new road route. To construct the road, alluvial material from Willow Beach Wash would be pushed from the wash bottom, along the entire road length, to the north side, resulting in only a few inches of lost material overall. An estimated 100,000- to 150,000-cubic feet of material would be moved. Also, approximately 1,300 feet downstream of the proposed treatment area, undercutting of the north bank of the wash has occurred creating an overhanging slope. The slopes here, and in other such areas, would be cut back to eliminate the overhang, allow for the appropriate placement of the road, and reestablish a natural grade on the banks and in the channel. All material for construction and reinforcement of the road is anticipated to come from the wash and removal of the overhang (i.e., no outside material should be required). A small ditch would be created on the north side of the new access road to carry runoff from the adjacent hill and protect the road. Upon completion of the road, the wash would be recontoured to minimize the impact of the excavation.

At the wastewater treatment area, the effluent would enter a buried holding tank adjacent to a recirculating sand filter bed contained in a below-grade structure. Effluent from the holding tank would be pumped into and continuously circulated through the sand filter, which produces a high-quality, treated effluent. A portion of the sand-filter treated effluent would be diverted into subsurface trenches for final treatment by soil filtration.

Existing sewerlines at the developed area will be abandoned in place and existing manholes would be removed. The two existing sewage lagoons would be demolished; the remaining sludge and liners would be removed and disposed of appropriately. The lagoons would then be filled and the area re-contoured to level a site for construction of a future maintenance area (see the *Willow Beach Development Concept Plan* 1994, and figure 3 of the environmental assessment).

Solids would be removed from septic tanks every three to five years and hauled by truck as wet aged anaerobically digested solids to an approved disposal facility about 90 miles away. Alternatively, the solids could be hauled to a flood-protected site near Willow Beach for drying as part of the treatment process to reduce the volume. The dried sludge would be hauled by truck to a different approved disposal facility, about 60 miles away. The method utilized by the National Park Service will be based on the costs and labor associated with either method. Both options would comply with state standards.

The new sewage treatment system would be designed to have sufficient capacity for projected additional sewage generated from future facilities proposed in the Willow Beach Development

Concept Plan Amendment (NPS 1994). Additional septic tanks and effluent collection lines would be installed and connected to the system as new facilities were built.

The system would meet Arizona standards for wastewater treatment. The system, as proposed, would be designed to operate during a 25-year flood and would be protected from a 100-year flood, as required by the state.

Alternative C proposed to replace the existing sewage lagoon system with a new lagoon system approximately 4,000 feet up the Willow Beach Wash from the existing lagoons. The proposed location is in a currently undisturbed area. While alternative C would provide better health and safety via improved sewage treatment, the system would substantially increase power usage, and a flood protection berm would alter the natural flow of stormwater runoff in Willow Beach Wash. The disturbance would be in an area not previously disturbed and would create a greater impact to natural resources.

### **SELECTED ALTERNATIVE**

The National Park Service selected alternative is alternative B, replacing the aging disposal and treatment system with a new system. This alternative is the same as presented in the environmental assessment with no modifications. The new system would treat sewage via septic tanks, a recirculating sand filter, and subsurface disposal. Alternative B meets the project objectives of providing for health and safety, natural resource protection, odor control, operational efficiency, reliability, and sustainability while bringing Willow Beach into compliance with applicable ADEQ regulations.

### **ENVIRONMENTALLY PREFERRED ALTERNATIVE**

An alternative must meet the following criteria to be considered an environmentally preferred alternative:

1. Fulfill the responsibilities of each generation as a trustee of the environment for succeeding generations.
2. Ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings.
3. Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
4. Preserve important historic, cultural, and natural aspects of our national heritage and maintain, whenever possible, an environment that supports diversity and variety of individual choice.
5. Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities.
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Based on the above criteria, the environmentally preferred alternative is the proposed action. Because the proposed action would reduce the risk of health and safety exposures and will concentrate construction in previously disturbed areas, this alternative best realizes criteria 1, 2,

and 3 above (The alternatives differ little with respect to criteria 4, 5, and 6). Alternative B fulfills the responsibilities of each generation as trustee of the environment for future generations, it ensures a safe and healthful environment, and attains beneficial uses of the environment without degradation, risk of health or safety, or other undesirable consequences.

Alternative A (no action) represents continuation of the existing condition (no improvements to the deteriorating wastewater treatment system at Willow Beach). Sewage collection and transmission lines leak while manholes, lift stations, and lagoon liners are deteriorating. State standards for treatment and disposal of effluent are not being met. The no-action alternative does not fully realize criteria 1, 2, and 3.

Under alternative C, the existing sewage lagoon system would have been replaced with a new lagoon system built about 4,000 feet up the Willow Beach Wash from the existing lagoons. New sewage lines, lift stations, and a force main would have been installed. Although alternative C would provide better health and safety via improved sewage treatment, new sewage lagoons would have been built in a previously undisturbed area, the system would also have substantially increased power usage, and a flood protection berm would have altered the natural flow of stormwater runoff in Willow Beach Wash. Thus, alternative C does not fully realize NEPA criteria 1 and 3.

## **MITIGATION**

Mitigation measures have been incorporated into the selected alternative to reduce impacts. Mitigation measures include surveying project areas for sensitive resources prior to construction; avoiding sensitive resources; clearly defining construction zones; avoiding introduction of non-native species; best management practices to minimize erosion, sedimentation, noise and dust emissions; blending cut areas into natural environment; and minimizing new disturbance.

Through consultation with the U.S. Fish and Wildlife Service for compliance with section 7 of the Endangered Species Act of 1973, as amended, specific mitigation measures will be implemented for protection of the desert tortoise.

The following table describes mitigation measures that will be implemented, including those for the protection of the desert tortoise.

**IMPACT/MITIGATION MATRIX**

<b>Impact Topic</b>	<b>Mitigation Measure</b>	<b>Responsibility</b>
Biotic Communities	Construction limits will be clearly marked with ribbons and stakes prior to the beginning of ground-disturbing activities. No disturbance will occur beyond these limits. Temporary construction fence will be installed, where determined necessary, by National Park Service project coordinators.	Contractor
	To maximize restoration efforts after completion of construction activities, the following measures will be implemented, as appropriate: <ul style="list-style-type: none"> <li>▪ Salvage topsoil from construction areas for reuse during restoration of disturbed areas.</li> <li>▪ Salvage native vegetation for subsequent replanting in the disturbed area.</li> <li>▪ Monitor revegetation success for three years following construction.</li> <li>▪ Implement remedial and control measures as needed.</li> </ul>	Park
	Revegetation will use desert topsoil (conserved in the project site, where appropriate) and seeds from native species (genetic stocks originating in Lake Mead NRA).	Park
	Revegetation efforts will attempt to mimic the natural spacing, abundance, and diversity of native plant species, where appropriate.	Park
	No imported topsoil (desert soil) or hay bales will be used during revegetation in an effort to avoid introduction of non-native plant species.	Park
	Desert soil will be stored, where appropriate, as close to its original location as possible to retain the local seed bank and soil type.	Contractor
	As necessary, desert soil replacement techniques will be used to re-establish desert crust surface and minimize impacts from invasive plant species such as Russian thistle ( <i>Salsola tragus</i> ), which often occur on disturbed sites.	Contractor

Impact Topic	Mitigation Measure	Responsibility
	Undesirable species such as Sahara mustard and saltcedar ( <i>Tamarix ramosissima</i> ), will be controlled in high-priority areas. Other undesirable species will be monitored and control strategies initiated if these species occur.	Park
	The treatment of exotic vegetation will be completed in accordance with Director's Order 13: <i>Integrated Pest Management Guidelines</i> . Lake Mead NRA is developing a non-native vegetation management plan to address specifics and analyze alternatives related to the control of noxious weeds and non-native vegetation.	Park
	<p>To prevent the introduction of and to minimize the spread of non-native vegetation and noxious weeds, the following measures will be implemented:</p> <ul style="list-style-type: none"> <li>▪ Minimize soil disturbance.</li> <li>▪ Pressure-wash all construction equipment before it is brought into Lake Mead NRA and before it is moved from one site to another.</li> <li>▪ Limit vehicle parking to existing roads or parking lots.</li> <li>▪ Obtain all fill, rock, or topsoil from the project area.</li> <li>▪ Initiate revegetation of disturbed sites, where appropriate, immediately following construction activities by spreading desert soil with its associated seed bank.</li> <li>▪ Monitor disturbed areas annually for two to three years following construction to identify noxious weeds or exotic vegetation, especially Sahara mustard.</li> </ul>	Contractor/Park
Threatened and Endangered Species, Species of Concern	Construction areas will be surveyed for desert tortoise sign by National Park Service-qualified, authorized biologists prior to construction. If desert tortoise burrows, dens, or other signs of desert tortoise use (e.g., scat, carcasses) are found during the survey, Lake Mead NRA standard construction mitigation measures related to desert tortoise protection will be implemented.	Park

Impact Topic	Mitigation Measure	Responsibility
Water Quality, Air Quality, and Noise	Erosion control measures will be implemented to minimize minor and short-term impacts to water quality. Sediment traps, erosion check structures, and/or filters will be considered	Contractor
	Trash and other construction debris will be located outside the wash (e.g., in the old trailer village site) to reduce the potential for nonpoint source pollution.	Contractor
	Silt fences, straw bale barriers, temporary earthen berms, temporary water bars, sediment traps, stone check dams, brush barriers, or other equivalent measures will be installed, including installing erosion-control measures around the perimeter of temporarily stockpiled materials prior to and during construction.	Contractor
	Regular site inspections will be conducted throughout the construction period to ensure that erosion-control measures are properly installed and function effectively.	
	Fugitive dust plumes will be reduced to the extent possible by sprinkling water during earth-disturbing activities.	Contractor
	Contractors will be required to use state-of-the-art noise reduction technology on construction equipment to the maximum extent practicable.	Contractor
	Chemicals, fuels, and other toxic materials will be stored, used and disposed properly.	Contractor
	Construction equipment will be refueled in upland areas only, to prevent fuel spills near water resources.	Contractor
Cultural Resources	Should previously undiscovered archeological resources be uncovered during construction, work will be halted in the discovery area, the site secured, and Lake Mead NRA would consult according to 36 CFR 800.13 and, as appropriate, provisions of the Native American Graves Protection and Repatriation Act of 1990.	Park
	In compliance with the Native American Graves Protection and Repatriation Act of 1990, the National Park Service will also notify and consult concerned American Indian representatives for the proper treatment of human remains, funerary, and sacred objects, should these be discovered during the course of the project.	Park

<b>Impact Topic</b>	<b>Mitigation Measure</b>	<b>Responsibility</b>
	Known archeological deposits (site AZ:F:2:2) are not within the preferred alternative project disturbance limits and will be protected by maintaining the fill that covers it, monitoring ground disturbances, and recording any significant data that may be uncovered.	Park
	Consultation with appropriate American Indian tribes will also identify specific mitigation measures for offsetting adverse impacts to ethnographic resources, including traditional cultural properties, within the Willow Beach area.	Park
Health and Safety	The potential for flash floods exists during the monsoon season (between July and September) and poses a threat to workers. Therefore, construction activities will be avoided during this time period if possible.	Contractor
	If project work between July and September is unavoidable, a safety plan for working in desert washes will be formulated.	Contractor
Visitor Safety and Experience	During construction, Lake Mead NRA visitors will be prevented from entering construction areas. Barricades and temporary construction fencing will be placed around construction areas to prevent visitor entry.	Contractor

## **ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION)**

### **Biotic Communities**

The replacement of the leaking and deteriorating wastewater treatment system at Willow Beach would eliminate existing impacts to wildlife (e.g., fish, amphibians, and birds) associated with potential discharges of sewage effluent to Lake Mohave, through groundwater infiltration or otherwise. This would have a short- and long-term, beneficial effect on biotic communities.

The installation of six septic tanks, duplex lift stations, and a central collection tank in the Willow Beach developed area would generally disturb paved surface areas that do not support vegetation and are of no habitat value to wildlife.

The new force main pipeline would be installed adjacent to the existing line, underneath a new access road. The majority of the disturbance along the 3,900-foot linear corridor required for this force main and access road would be within Willow Beach Wash. However, the effects would be predominantly in areas previously disturbed for construction of the existing force main and access road, and areas subject to periodic flooding, reducing the level of impact of this activity on vegetation. There would be some effects to previously undisturbed vegetation in areas that would be regraded to eliminate overhangs on the north side of the wash.



Construction of the recirculating sand filter, subsurface disposal trenches, and associated control buildings, would require clearing approximately 17,975-square feet (0.41 acre) of desert wash vegetation. Associated soil disturbance increases the potential for non-native species to invade the area of disturbance and alter the natural ecological community. The mitigation measures identified for the preferred alternative, including washing equipment, selective positioning for equipment staging, defining construction zones and perimeters in the field, and saving/storing desert soil (and the soil seed bank) for restoration and revegetation of areas to be reclaimed would further reduce these impacts. As a result of implementing the proposed action, including mitigation measures, long-term, negligible to moderate, adverse impacts to desert wash plant communities would be anticipated.

During construction, some wildlife, particularly small mammals, reptiles, and amphibians, would be temporarily displaced. Some individuals may be killed outright or dispersed outside the construction limits, making them susceptible to predation or competitive stress. However, following completion of the project, wildlife would again reoccupy portions of the project area. The potential for sedimentation and erosion during construction (see the “Floodplains and Water Quality” section for a detailed discussion) could also contribute to turbidity (cloudiness) in Lake Mohave. If severe, turbidity can reduce light penetration and visibility, affect aquatic organisms, and reduce the ability of predatory fish and birds to see their prey. Therefore, the proposed action is anticipated to have short-term (during construction activities), negligible to minor, adverse impacts on wildlife.

### **Threatened and Endangered Species and Species of Concern**

As discussed for “Biotic Communities” and “Floodplains and Water Quality,” (below) the proposed action would eliminate existing impacts associated with potential discharges of sewage effluent to Lake Mohave. Eliminating this threat to infiltrated lake water and surface water quality at Willow Beach would have beneficial effects for the razorback sucker and bonytail chub, including the critical habitat in Lake Mohave for these species. Desert tortoises have not been sighted in the Willow Beach area since 1990, and although bald eagles could be transient in the area, no effects are expected to either of these species as a result of the proposed action. Construction areas would be surveyed for desert tortoise prior to construction. If any sign of desert tortoise is found, Lake Mead standard construction mitigation measures related to desert tortoise protection would be implemented.

### **Floodplains and Water Quality**

The existing flood protection berm would be reinforced to eliminate concerns associated with current and future damage, including erosion. Construction of the new road and additional berms around the sewage disposal area would alter or divert existing flood flows. This could change the morphology and processes of the floodplain in Willow Beach Wash, which would have a long-term, minor, adverse impact on this resource.

Replacement of the leaking and deteriorating wastewater treatment system at Willow Beach would eliminate the impacts to surface and groundwater quality associated with potential discharges of sewage effluent under the no-action alternative. This would have a long-term, beneficial effect on water quality in the Willow Beach area.

Erosion and sedimentation associated with construction of a new wastewater treatment facility at Willow Beach, including demolition of the existing lagoons, are also important processes related to water quality impacts under this alternative. Erosion occurs when soil particles, sand, small rocks, and other sediments are swept up and carried along by moving water, as from a rain event. Sediments in the project area would likely drop out downstream in Willow Beach Wash, or they would be carried into Lake Mohave. Some degree of erosion and sedimentation is normal, but the process accelerates when desert soils and gravel are loosened or otherwise disturbed by activities such as construction. The project area would, therefore, be most susceptible to erosion and sedimentation during construction; however, if possible, construction activities would be conducted outside of the monsoon season (July, August, and September) to avoid flash flood events that would exacerbate erosion and sedimentation.

Using best management practices for controlling non-point pollution during construction would help to control erosion and sedimentation during small storm events, as well as the potential for spills from construction equipment to introduce petrochemicals into the surface and groundwater of Willow Beach. However, if a major rainstorm were to occur during construction, sediments could be carried to Lake Mohave and contribute to turbidity (cloudiness) in the lake. Depending on the extent to which storm events could be avoided, increased erosion, sedimentation, and turbidity during construction could have short-term, negligible to minor, adverse impacts on water quality. Given the current potential for petrochemical spills from vehicles and boats in the Willow Beach area, and the implementation of best management practices, the use of construction equipment could have short-term, negligible, adverse impacts on water quality.

### **Soils**

The disturbances in the Willow Beach developed area resulting from the installation of six septic tanks, duplex lift stations, and a central collection tank, would be within the existing paved parking area. There would be no new ground disturbance in this developed area and, therefore, no impacts to soils from installing these features.

As described for biotic communities above, the installation of a new force main and construction of an access road in Willow Beach Wash would cause disturbances along an approximately 3,000-foot linear corridor, in areas previously disturbed by construction of the existing force main and access road. There would be some disturbance to previously undisturbed soils in areas that will be regraded to eliminate overhangs on the north side of the wash. Construction of the recirculating sand filter, subsurface disposal trenches, and associated control buildings, would require disturbance to 0.41 acre of desert wash soils. However, some of these soils were previously disturbed during construction of the existing lagoons. Rehabilitation and revegetation efforts would reduce scarring and loss of soil through erosion. Natural soil processes would be restored in rehabilitated areas only over the very long term, as soil structure slowly returned to a more natural condition. Some trampling and compaction of soils by construction equipment and workers within the construction zone is expected. Local soil compaction would temporarily decrease permeability, alter soil moisture content, and diminish the water storage capacity of the generally xeric soils. Overall, the impacts to soils from the proposed action are expected to be long term, minor, and adverse.

## **Air Quality**

The proposed action would temporarily affect local air quality through increased dust and vehicle emissions. Hydrocarbons, nitrous oxide, and sulfur dioxide emissions would be largely dispersed by prevailing winds in the Willow Beach area. Dust created during construction would increase airborne particulates intermittently, but airborne dust is not expected to be appreciable. Mitigation measures such as sprinkling water to reduce dust and limiting the idling of construction equipment would be implemented, as appropriate. Impacts to air quality from dust and construction equipment emissions would be short term, negligible to minor, and adverse.

## **Ethnographic Resources**

As a result of consultation with American Indian tribes on the *Willow Beach Development Concept Plan* and other projects within Lake Mead NRA (e.g., the Hoover Dam Bypass Project, NPS 2001c), it is known that construction in areas affiliated with the Ha'tata and Salt Song Pathway would have adverse effects on ethnographic resources.

The proposed action, however, represents an implementation of the *Willow Beach Development Concept Plan*. Tribal consultation for development of the plan indicated no concerns associated with the project area (NPS 1994a). Ground disturbing activities associated with the installation of septic tanks, pumps, and sewerlines in the developed area would, for the most part, occur in areas previously disturbed for construction of the existing wastewater treatment system. With continued consultation and mitigation (e.g., maintaining the fill covering, monitoring the excavation, and halting activities if human remains are inadvertently discovered), it is anticipated that impacts to ethnographic resources would be short and long term, negligible, and adverse.

Tribal consultation would continue during implementation of various components of the *Development Concept Plan*, including the wastewater treatment improvements of this preferred alternative. If ethnographic resource concerns are identified, consultation would continue to allow identification of appropriate mitigation measures.

## **Visitor Use and Experience**

Under the proposed action, the aging wastewater disposal and treatment system would be replaced with a new system that treats wastewater via septic tanks, a recirculating sand filter, and subsurface disposal. During construction, visitors could expect to see construction vehicle traffic on the road to Willow Beach, as well as within the Willow Beach developed area. Visitors would experience partial closure of walkways, roads, and parking areas while buried system components were being replaced within the developed area. Complete closure of Willow Beach visitor services or facilities should not be necessary, as the old treatment system would remain in operation until the new system is brought into service. To the extent possible, construction activities would be scheduled to avoid busy visitor periods such as weekends and holidays. Impacts of construction on visitor use and visitor experience would be minor, short term, and adverse.

## **Health and Safety**

Replacement of the leaking and deteriorating wastewater treatment system at Willow Beach would eliminate the potential to introduce sewage effluent into the infiltrated lake water that serves as a water source for the area. The recirculating sand filter and subsurface disposal systems would not produce odors that could affect visitors or National Park Service employees. In fact, the preferred alternative calls for improvements to odor controls on fish cleaning stations. Therefore, short- and long-term, beneficial effects to health and safety would be anticipated.

If construction were completed outside of the monsoon season, risks to worker safety from flash flooding would be reduced. However, if the project extends into July, August, and September, there is a greater risk of flash flooding. If work extends into those months, the construction contractor should implement a safety plan for working in desert washes. With a safety plan, the risk would have short-term (for the duration of the construction), negligible, adverse effects on worker safety related to desert washes and flash floods. The risks to Lake Mead NRA staff involved in operating and maintaining the wastewater treatment facility from flash flooding would be slightly reduced when compared to the current situation, as the new system would likely require fewer operation and maintenance activities in Willow Beach Wash.

## **PUBLIC INVOLVEMENT AND CONSULTATION**

Staff of Lake Mead NRA and resource professionals from the National Park Service, Denver Service Center, conducted internal scoping. This interdisciplinary process defined the purpose and need, identified potential actions to address the need, determined the likely issues and impact topics, and identified the relationship of the proposed action to other planning efforts at Lake Mead NRA.

A press release initiating scoping and describing the proposed action was issued on November 7, 2002. Comments were solicited during a public scoping period that ended December 7, 2002. No comments were received.

The environmental assessment was made available for public and agency review and comment during a 30-day period ending November 15, 2003. Lake Mead NRA provided copies of the document to area libraries and interested parties on the park mailing list. Approximately seventy-five copies of the document were distributed to individuals, businesses, and organizations on the recreation area's mailing list. The document was available for review on the park Web site, or interested parties could contact the park by phone or mail and request copies of the document.

Agency comments were received from the U. S. Fish and Wildlife Service, Hualapai Indian Tribe, Paiute Indian Tribe of Utah, The Hopi Indian Tribe, the Arizona State Historic Preservation Office, the Nevada State Historic Preservation Office, the Nevada State Department of Administration, and the Metropolitan Water District. All but the Metropolitan Water District supported the project as written.

The Nevada State Historic Preservation Office, U.S. Fish and Wildlife Service, and Hopi Indian Tribe had no comments on the project (letters dated November 6, 2003, October 27, 2003, and October 8, 2003, respectively). The Arizona State Historic Preservation Office had previously concurred with the project (July 3, 2003). The Paiute and Hualapai tribes requested that they be notified if cultural resources are discovered during the project (**letters dated October 6, 2003 and November 6, 2003, respectively**).

The Metropolitan Water District does not support the preferred alternative as written. They support Alternative C. Their concerns and questions relate to the potential downstream effects from the use of the treatment system, including pathogens entering the source waters, and additional inputs of phosphorus and nitrogen. Alternative C was not selected primarily because of the risks associated with a 100-year or greater flood event and the risk of a sewage overflow. Additionally, alternative B meets all the state and federal regulatory requirements, and meets the goals of protecting the environment and human health. No modification to the environmental assessment occurred as a result of the letter.

The NPS received one letter from an individual with comments and questions regarding water conservation programs and procedures. This is outside the scope of the environmental assessment for the wastewater treatment facility improvements. The park will provide a response letter to the individual addressing the comments.

## **PERMITTING REQUIREMENTS**

The National Park Service has initiated the U.S. Army Corps of Engineers permitting process, and will obtain an individual permit pursuant to section 404 of the Clean Water Act; an Arizona Department of Water Quality Aquifer Protection Permit; an Arizona Pollutant Discharge Elimination System General Permit for Stormwater Discharges associated with Construction Activities; and, an Arizona Pollutant Discharge Elimination System Applicator Registration, Bulk Biosolids, prior to commencing the project.

Floodplain values and a risk assessment were considered in the development of alternatives. The treatment facility would be constructed in an area above the wash and floodplain therefore no impacts to floodplains would occur.

## **IMPAIRMENT OF PARK RESOURCES OR VALUES**

The effects of the proposed action will not impair park resources or values necessary to fulfill specific purposes identified in the park's enabling legislation. Impacts documented in the environmental assessment and summarized above will not affect resources or values key to the natural and cultural integrity of the park or alter opportunities for the enjoyment of the park. The proposed action will not impair park resources and will not violate the National Park Service Organic Act. This conclusion is based on a thorough analysis of the impacts described in the environmental assessment, the agency and public comments received, and the professional judgment of the decision-maker in accordance with *National Park Service Management Policies*, 2001.

## CONCLUSION AND BASIS FOR DETERMINATION

Based on the analysis completed in the environmental assessment, the capability of the mitigation measures to reduce, avoid, or eliminate impacts, and with due consideration of public response, the National Park Service determined that the selected alternative does not constitute an action that normally requires the preparation of an environmental impact statement.

The selected alternative does not constitute a major federal action significantly affecting the quality of the human environment. The selected alternative would provide for improved health and safety, and water quality in the Willow Beach area, while providing some beneficial impacts to park (biotic) resources and would not have a significant effect on the human environment. There are no significant impacts on public health, public safety, threatened or endangered species, historic properties, either listed in or eligible for listing in the National Register of Historic Places, ethnographic resources, or other unique characteristics of the region. The Arizona State Historic Preservation Office concurred on this determination.

There are no highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence identified. Implementation of the action would not violate any federal, state, or local environmental protection law. Therefore, in accordance with the National Environmental Policy Act of 1969, and regulations of the Council on Environmental Quality (40 CFR 1508.9), an environmental impact statement will not be prepared for this project and the selected action may be implemented as soon as practical.

Recommended:

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William K. Dickinson  
Superintendent, Lake Mead National Recreation Area

Date

Approved:

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Jonathan B. Jarvis  
Regional Director, Pacific West Region

Date